



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,656	02/19/2002	Charles M. Woods	GMI 007 P2	5222

33805 7590 09/09/2003

WEGMAN, HESSLER & VANDERBURG  
6055 ROCKSIDE WOODS BOULEVARD  
SUITE 200  
CLEVELAND, OH 44131

EXAMINER
----------

YEE, DEBORAH

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 09/09/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/078,656

Applicant(s)

WOODS, CHARLES M.

Examiner

Deborah Ye

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-17 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al (US Patent 5,433,798), Kadoya et al (US Patent 5,798,082) or Hasegawa et al (US Patent 5,650,024).

Each reference teaches martensitic steel alloy examples which meet the claimed composition. See Takano, Table 1 (1), columns 9-10; Kadoya, Table 1, columns 11-12; Hasegawa, Tables 8-1 to Table 25-3, columns 24-53. Although prior art alloys contain additional elements (e.g. W, N, Nb, Ti, Zr, Ta, Hf and/or V), such elements would not appear to affect the basic and novel characteristics of the present invention and hence would not be excluded from the claim reciting "consisting essentially of".

Moreover, a HRC hardness of 40-50 would be expected since compositional limitations are closely met and in absence of proof to the contrary, see MPEP 2112.01, In re Best, 195USPQ 430.

Claims 2 to 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al (US Patent 5,433,798), Kadoya et al (US Patent 5,798,082) or Hasegawa et al (US Patent 5,650,024).

The English abstract of each patent discloses a martensitic steel alloy with constituents whose wt% range overlap those recited by claims 3 and 4, and also have broad enough ranges which encompass the specific steel compositions recited in claims 5 to 8. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portions of the ranges disclosed by the patents because close approximation or overlapping ranges establishes a prima facie case of obviousness, see *In re Malagari*, 182USPQ549 and MPEP2114.05.

More specifically, note example 639 in Table 22-1 to 3 in columns 47 and 48 which meets claim 3 except contains 2.5%Ni which is slightly higher than the claimed range of 1-2%Ni. Since applicant has not demonstrated criticality of the Ni range, then it would seem that a composition with 2%Ni vs. a composition with slightly more (say 2.5%)Ni would depict a mere difference in the proportion of element without any attendant unexpected results which would not patentably distinguish claim over prior art.

Moreover, although prior art does not teach 40-50HRC recited in claims 2 and 4, such property would be expected since compositional limitations are closely met, and a tempered martensite is disclosed.

***Allowable Subject Matter***

Claims 9 to 17 are allowed.

The following is an examiner's statement of reasons for allowance: The art of record does not teach or fairly suggest the process for forming a cast martensitic mold

Art Unit: 1742

alloy by forming a molten mixture based upon a composition, as claimed, followed by cooling to form a fully tempered martensite without tempering heat treatment.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Respons to Arguments***

Art Unit: 1742

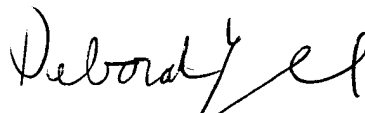
Applicant's arguments filed July 25, 2003 have been fully considered but they are not persuasive. Applicant amending claims 1 and 3 to recite "consisting essentially of" would not distinguish claims over prior art because applicant has not shown (e.g. by comparative test examples) that additional unrecited elements would affect the basic and novel characteristics of the present invention. Claims would be allowable if applicant amends claims to recite --consisting of ---.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 703-308-1102. The examiner can normally be reached on Monday-Friday from 6:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-873-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

dy  
September 6, 2003

  
**DEBORAH YEE**  
**PRIMARY EXAMINER**